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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/820,887 | 03/30/2001 | Michael P. Dallmeyer | 051252-5188 | 4450 |

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EXAMINER

KENNY, STEPHEN

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3726

DATE MAILED: 09/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/820,887

Applicant(s)

DALLMEYER ET AL.

Examiner

Stephen J Kenny

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 13 and 18-20 is/are rejected.
- 7) ☐ Claim(s) 6-12 and 14-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 6 objected to because of the following informalities: there is an extra comma in line 2 “assembling a fuel tube, assembly” should read “assembling a fuel tube assembly”.

Appropriate correction is required.

Drawings

The drawings are objected to because

Page 3, line 21 the orifice disk (254) is not illustrated in the drawings; on page 4, line 15 the bore (267) is not illustrated in the drawings; on page 4, line 17 the elongated opening (269) is not illustrated in the drawings. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

The information disclosure statement filed 3/20/02 in part, fails to comply with the provisions of 37 CFR 1.97, 1.98, 1.52(e) and MPEP § 609 because a legible copy of each U.S. and foreign patent; each U.S. application; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed is required (Only the information on the CD-Rom provided by applicant containing the related U.S. applications does not suffice and has not been considered by the examiner). It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is

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advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 13, 18, & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maier (US Patent No 6012655) in view of Applicant's Admitted Prior Art (AAPA).

Regarding claim 1, Maier discloses fabricating a fuel group (column 6, lines 11-26) and a power group (column 6, lines 4-10) independently from each other, inserting the fuel group into the power group, and fixedly connecting the fuel group to the power group (column 6, lines 20-25). Maier further discloses that the power group may be formed outside (of the "clean") fuel group assembly (column 1, line 66 – column 2, line 9).

Maier does not explicitly state that the fuel group be formed in a "clean room".

AAPA discloses that fuel injector assemblies are performed in a contaminant free or "clean room" environment (page 1, line 19-20). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the fuel group, and power

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group components in alternative environments (i.e. “clean” & “dirty”) as disclosed by Maier – wherein the clean environment comprises a “clean room” as taught by the AAPA. This would allow for a more economical fuel injector assembly (i.e. the power group sub-assembly could be manufactured outside of the clean room, thereby alleviating the costs associated with providing a clean room environment).

Regarding claims 3-5, 13, 18, & 19 Maier/AAPA disclose the instant invention except for explicitly stating that the fuel flow test, inserting the fuel group into the power group, and the fixedly connecting steps are performed exterior of the “clean room”. However, due to the fact that the power group and fuel group sub-assemblies are formed in separate environments (i.e. “clean” and “dirty”) as disclosed by Maier (column 2, line 7), it is inherent that in order to combine the two sub-assemblies, one of said sub-assemblies would have to be removed from its manufacturing environment. It would have been an obvious matter of design choice to perform the flow test, inserting, & connecting steps exterior of the clean room, since applicant has not disclosed that performing these steps exterior of the clean room solves any stated problem or is for any particular purpose, and it appears that the invention would perform equally well with the above mentioned steps being performed inside the clean room.

Claims 2, & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maier/AAPA as applied to claim1 above, and further in view of Baxter et al. (US Patent No 5979866).

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Regarding claim 2, Maier/AAPA disclose the instant invention except for performing a fuel flow test on the fuel group, prior to inserting the fuel group into the power group.

Baxter discloses performing a fuel flow test on the fuel group (hydraulic sub-assembly 131), prior to inserting the fuel group into the power group (electrical sub-assembly 132) (page 3, lines 4-9 & column 17, lines 34-44). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the fuel & power groups disclosed by Maier/AAPA while performing a flow test on the fuel/hydraulic group prior to inserting said fuel/hydraulic group into the power/electrical group as taught by Baxter in order to ensure the performance of the fuel/hydraulic group and thereby reduce the probability of error/failure of the completed fuel injector assembly.

Regarding claim 20, Baxter discloses fixedly connecting the fuel group (hydraulic sub-assembly) to the power group (electrical sub-assembly) by a welding process (column 22, lines 19-21).

Allowable Subject Matter

Claims 6-12, & 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Forming a fuel tube assembly prior to forming the fuel group sub-assembly, which includes an inlet tube and a non-magnetic shell; as well as Fabricating a power group sub-assembly by fixedly connecting a magnetic housing to an electro-magnetic

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solenoid coil, in combination with the other limitations of the claims, is not disclosed nor taught by the prior art.

Conclusion


The prior art made of record on the attached PTO-892, and not relied upon is considered pertinent to applicant's disclosure. References cited include 6047907, 6027049.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J Kenny whose telephone number is 703-306-0359. The examiner can normally be reached on mon - fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

sk SK
September 9, 2002


GREGORY M. VIDOVICH
PRIMARY EXAMINER